

The Macdonald Journal

OCTOBER 1981

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The Macdonald Journal

OCTOBER 1981

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In This Issue

Cover: The planting of young trees and the addition of flower beds continues on the "new" Macdonald Campus. Macdonald Reports on Page 8 features some of the happenings during the past few months.

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Journal Jottings

Our guest editorial could very well be considered as preaching to the converted, but then it is comforting on occasion to read something with which you agree. And it's rather good for the ego if you are part of the successful subject under discussion — and many of you are.

There has been some considerable time since Dr. Mark Waldron wrote an editorial for the Journal. As a native of the Townships, as first a student at Macdonald and then Director of the Extension Department and Editor of the Journal, Mark Waldron had a keen interest in and knowledge of Quebec's — indeed Canada's — rural community. Dr. Waldron has been with the University of Guelph since 1971, but his occasional visits to this campus have

indicated that the Quebec connection has not lessened. He was thus a natural to write the editorial on community development which Professor Micheline Chevrier and I wanted to tie in with her lead article "Rural Development: A look to the Future." We are delighted to have Dr. Waldron back on the pages of the Journal and hope his next piece will not be so long in coming.

While Mark Waldron focuses on the local citizens' approach to community development, i.e., the if you want something done, do it yourself attitude, as a sociologist, Professor Chevrier takes a broader view and discusses both citizen and professional, i.e., government, universities and colleges, participation in rural development.

In recent years Professor Chevrier

has noticed an increasing awareness by urban as well as non urban people in rural development. The environment, agricultural land, food production and costs; these and other areas have become everyone's concern.

More people taking a knowledgeable interest in things rural augurs well for the future, but with governments coming and going and policies changing in other organizations, the main impetus for taking action and getting things done will no doubt remain at the local level where the citizens will continue to transfer an idea into reality. That impetus is called community spirit, a spirit that has been nurtured for years and handed down by each succeeding generation.

Hazel M. Clarke

Editorial

A "Bottom-Up" Approach to Community Development

It is 11:00 p.m. Millions of Canadians sit back to watch the parade of death, doom, and disaster that we call our National News. Assassinations, strikes, and increasing interest rates seem to be the normal news fare — a litany of changes which affects each of us in some small way at the same time as being a litany to which most of us have become immune, unresponsive, and just plain bored. In fact, by the end of the newscast, many Canadians have simply fallen asleep!

Last week, however, some sly and creative news gatherer slipped an item into the National News that made me sit up and take notice. It did not focus on disaster or the state of the economy. It focussed, instead, on the actions of a group of citizens to make their community a better place in which to live. The community was Wakefield, alias St. Pierre de Wakefield, on the Quebec side of the Ottawa River. The news item told how the community had redeveloped itself, how a group of artists and handicappers had opened village shops and how there was a new "*esprit de corps*" in terms of community life and lifestyle. The news item presented Wakefield as a place in which any one of us would want to live. The news item did not say anything about the local leadership in developing the community, the level of government support, or the possible helping hand of an agronomer, adult educator, or professional community developer. The news item also did not say anything about the issues of reorganization of school boards, the plight of high interest rates for farm loans, or the feeling of many people in Wakefield

that the shadow of the Peace Tower in Ottawa is far stronger than the shadow of the National Assembly in Quebec. It was a "pretty" news item, a pleasant relief from the usual news fare, but the kind of news item that should make us think about the nature of community development in Canada.

Rural community development has been a fact of life in this country since the early settlers built log cabins, general stores, and one room schools. It was not something invented by the federal government with ARDA, DREE, FRED, and all those other acronyms that the government coined for political involvement in rural development. Rural development was what had gone on for many generations when rural people needed to help each other in building the kinds of communities and services that they needed. Canada is filled with these examples of the citizen involved approaches to community development. In Quebec, the Farm Forum idea was one of the most dynamic and people-oriented activities that led to major changes in how people felt about community and national issues. Even today, the Farm Forum topics and study guides are highly related to contemporary issues. In Nova Scotia, the Antigonish Movement was a citizen-oriented, "bottom-up" approach to improving the quality of life for rural people. The same applies to the Community School Movement in Prince Edward Island and Quebec. The Quebec Women's Institutes are another example of how rural people can organize themselves for community development.

Just 10 miles away from where I am writing this is a perfect example of how a community took hold of itself to become a model of self-reliant development. The village of Elora was a decaying, tired old collection of stone buildings located on the side of a gorge carved by the Grand River. Through citizen involvement, the main street has become a restored village street of the 1800s. The grist mill has become one of Ontario's leading gourmet restaurants and hotels. A major music festival during the summer reinforces the high quality of community cultural life. And all this was accomplished by the local people without the help of massive government funding or outside leadership.

All these community development activities have a key element of success — that is that they are based on the "bottom-up" approach whereby local people decide what they want to make of their communities and then proceed to look after local development themselves. Rather than looking for outside help, rather than sitting back and complaining about a dying rural community, rather than wishing for a rich godfather to drop off a million dollars, rural people in Canada must take the bull by the horns, adopt the "bottom-up" approach and express their right to participate in decisions that have an effect on their well-being. The "bottom-up" approach of participatory democracy in community development is the superior method of ensuring that our rural communities are the kinds of communities that we want.

Dr. Mark W. Waldron
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University School of Part-Time
Studies and
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University of Guelph

A LOOK TO THE FUTURE



by **Professor Micheline Chevrier**
Community Resources
Department of Renewable
Resources

Interest in rural development is well attested to by two conferences this year on the subject. The first was held last May at the University of Guelph. Sponsored by the University, the Ontario Ministry of Agriculture and Food, and the federal government, it lived up to its label of a "national conference", since all 10 provinces were represented among the participants. There were academics and students, personnel from all three levels of government, extension services including home economic extension, representatives from native people's organizations, and the Canadian Federation of Agriculture, among others, as well as interested citizens. The topics covered in workshops included: The small community; developing a rural voice; changing technologies; challenges

to rural families, and a viable agriculture.

The second conference, which is international in scope, will be held at the end of October. Sponsored by the University of Ottawa and the Institute for International Development and Co-operation, it will bring together delegates from around the world. Its theme is: Rural Development and Retention of the Rural Population in the Countryside of Developing Countries. It will focus its attention on the realizations and problems of Asian, African, and Latin American countries.

The Nature of Rural Development

Interest in rural development is often accompanied by some confusion as to the meaning of the term and the nature of the phenomenon to which it refers. To alleviate this confusion, I would like to situate rural development firmly in the context of change. Change is a natural process that has occurred

throughout human history. Development refers to deliberate interventions undertaken to achieve specific goals. These interventions have usually taken the form of action programs aimed at bringing change at the local, regional, or national levels. So, planned change in social structures is the aim of development as I understand it, rather than simple growth or expansion.

Rural development is a multi-faceted enterprise which has historically in Canada involved governments and their agencies, citizens' groups, and the universities in a great variety of action programs, some in response to the need to implement long-range policies, some in response to specific crises. The focuses of these action programs have been: agricultural development, rural industrialization, and community development. The goals of the first two have been to improve the economic conditions of the rural population, while the aim of the third

has been the improvement of the quality of life of rural residents.

Agricultural development. It is probably in the field of agricultural development that the role of governments has been most spectacular all the way from the ARDA¹ programs and the marketing boards which have profoundly changed the orientation of agricultural production, in Canada, to the British Columbia and recent Quebec legislation on the Protection of Agricultural Land. But farmers themselves have contributed to agricultural development through the formation of professional associations whose aims have been the dissemination of information among producers in order to improve breeds and agricultural practices, and to promote the rights and protect the interests of producers.

Co-operatives have an impressive record in Canada. Recent statistics from Agriculture Canada list 2,500 co-operatives, with a membership of close to 2.5 million and a volume of business of \$7.8 billions.

Agricultural fairs have played an important part in both agricultural and community development. They have set standards of excellence and they have promoted a spirit of co-operation among members of the community. They still retain these features, but they now perform an interesting new function. They provide a window to rural life for the increasing number of urban families who visit them every year.

Finally, faculties of agriculture and agricultural colleges are important contributors to agricultural development through research, teaching, and the formation of agricultural and food specialists and home economists, and through their extension services.

Industrialization of rural areas.

Job creation programs aimed at raising rural incomes and at the

retention of population, particularly the young in the countryside, were part of the ARDA mandate. With the phasing out of ARDA, this mandate in a slightly enlarged context was taken over by the Department of Regional Economic Expansion (DREE). But rural industrialization has been of much concern to municipal councils, chambers of commerce, and local businessmen's associations. Rural industrialization has probably created more heated debates, and promoted more citizen participation, than any other topic, since there is a fine line between the need to create local jobs and the danger of having the character and the traditions of a community disappear under the influx of newcomers.

Community development.

More than any others, community development programs are people-oriented; they mobilize local talents, local energy, and local resources to meet the felt needs of individual communities. They are the epitome of the citizen participation and the self-help approach to development. Your own community, I am sure, can provide some good examples. The success of such ventures can best be measured by the degree to which people have developed the ability to evaluate their own problems and satisfy their own needs. Dr. Mark Waldron, in his editorial "A 'Bottom-up' Approach to Community Development" (page 2), gives successful historical and current examples of community involvements.

A Look to the Future

Since rural development as I understand it seeks to bring about change, it is by definition future oriented. What are some of the challenges facing us? Recently, in class, a student said he felt I was taking too positive a view of the role of governments in rural development, and that I had failed to stress the negative effects of such interventions. You may agree with my student. On the other hand, you probably will agree with me that government intervention is not only inevitable, it is necessary in the context of our modern economy with its national and international markets. The provincial and national govern-

ments alone have the resources to ensure that rural communities have services in the fields of health, education, and leisure equal to those of urban residents. The challenge, of course, is to render governments and their agencies more responsive to the needs of rural people. To meet this challenge is not going to be easy. Rural communities are small and dispersed over a vast territory, and they face diverse environmental and social problems. As a consequence, they are fragmented and their varied voices have often carried little political force. Another challenge facing rural communities is the fact that so many of the decisions affecting them are made by business and governments in large urban centres without awareness and even less sensitivity of local needs. The third challenge is the continued exodus of young people in search of better career opportunities and the reverse movements of ex-urban residents to the countryside, bringing with them different values and lifestyles.

Jackie Wolfe of the University of Guelph, speaking at the Rural Development Conference mentioned earlier, identified the following types of citizen involvements which have proved successful in the recent past: the formation of citizen organizations or movements as a reaction to external decision-making; institutionalized participation in the arena of public decision-making, that is, participation built into specific legislation which obliges government agencies to formally consult populations affected by the decisions and, thirdly, community initiatives of the self-help type undertaken to solve specific problems or to create a better social environment.

I am very optimistic that the challenges facing rural people will be met, and my optimism is based on hard facts: the growing awareness of all Canadians of the importance of agriculture and the place it occupies in the economic and social life of the nation; the continued high student enrolment in the faculties of agriculture and, finally, the interest in rural development I have witnessed in the last six months.

¹Agricultural Rehabilitation and Development Act.

Economic Profile of the Apple Industry in Quebec

by O. Al-Zand and C. Charron¹

Despite this year's severe climatic conditions adversely affecting apple production, apple growing remains a dominant activity in fruit and vegetable production in Quebec. The abnormally cold winter compiled with late frost during flowering season have significantly affected yields and total output. Since different apple varieties do have different growing and fruiting patterns, it can be assumed that yield losses could have been smaller with diversified apple plantation instead of the specialized McIntosh trees. During the 1974-78 period, this province contributed an average of 23 per cent to Canadian apple production. Apple production accounted for 64 per cent of the province's farm cash receipts from fruit production in 1978. Revenues from apple sales account for about one per cent of total farm cash receipts in the province. Despite the low relative importance of the apple industry, it is considered a major income generator in the counties where apple production is concentrated.

Orchards are located in the southern part of the province, from the Ontario border east to the County of Missisquoi and from the U.S. border north to the County of Deux-Montagnes. Some orchards are dispersed around Quebec City.

The objective of this paper is to (a) describe the recent economic, technical, and production status of the industry, and (b) examine the socio-economic profile of the producers and production units operating in this province.

In order to obtain relevant data and information for the purpose of this study, a sample survey of apple producers was conducted during March 1980.

O. Al-Zand is a Professor in the Department of Agricultural Economics and C. Charron is a third-year undergraduate student majoring in Agricultural Economics.

The Survey

The survey consisted of a questionnaire which was sent to 201 producers with orchards larger than one hectare. A random selection of growers was done starting from a list of 724 names and address supplied by the Quebec Apple Grower's Association. The randomization was compared to the percentage geographical distribution derived from the original list of producers and it proved to be significantly similar (Table 1). The percentage distribution of the respondents was similar, although the participation was greater among the main producing areas. Twenty-seven per cent of the solicited growers responded to the questionnaire so that eight per cent of Quebec growers were covered by this survey.

Before undertaking the interpretation of the survey results, a brief description of the structure and development of the Quebec apple industry is presented.

The Apple Industry in Quebec

Up until 1967 apple production in Quebec showed a modest and gradual increase (Table 2). Since then, however, production has been decreasing significantly. For example, a three-year moving average shows a production of 96 thousand metric tons for 1979 in comparison to 113 thousand metric tons in 1967. During the same period apple production in Ontario has been rising steadily, especially

since 1974 where average production increased by 17 per cent in five years.

Furthermore, a high coefficient of variability characterizes apple production in Quebec. From 1970 to 1979 the coefficient has been of 17 per cent in Quebec in contrast to 11 per cent in Ontario over the same period. This implies that on average apple production in Quebec in any given year is about 17 per cent higher or lower than the previous year.

Several reasons are behind this significant variability in production. Among them are controlled factors such as the use of tree-growth regulator since the mid 1960s, heavy pruning since the mid 1970s, random tree selection methods, and irregular use of proper cultural practices and fertilizer applications. The uncontrolled factors affecting variability include climatic conditions such as excessive moisture and fruit damage. These uncontrolled factors, however, are largely random in nature and do not necessarily affect production adversely.

The Technology Level

Briefly, a size-controlling rootstock provides a smaller and more manageable tree in terms of harvesting, spraying, and pruning. The rootstock inhibits growth so that the trees can be planted closer to each other, resulting in a higher density of planting and a higher return per hectare. Almost non-

TABLE 1. Percentage geographical distribution of the growers, the selected growers, and the respondents.

Area	Growers		Selected Growers		Respondents	
	Number	Per cent	Number	Per cent	Number	Per cent
Rouville	186	29	59	29	18	33
Huntingdon	183	28	58	29	19	35
Deux-Montagnes	133	21	41	21	8	15
Missisquoi	62	10	20	10	6	11
Other Areas	80	12	23	11	3	6
Total	644	100	201	100	54	100

existent in Ontario 20 years ago, the size-controlled trees accounted for 67 per cent of the total number of trees in 1976. In Quebec the situation is somewhat more difficult to assess because of non-existent data. For this reason a good part of the survey deals with orchard rejuvenation and technology adoption.

On the aggregate Ontario has 26 per cent more growing area than Quebec, but its production was 55 per cent higher in 1979. This suggests that improvement is possible in Quebec and that the yield could be improved substantially. Ontario produced an average of 16.6 tonnes per hectare in contrast to 13.5 in Quebec, a 23 per cent difference.

The adoption of yield improving technologies in Quebec apple growing areas is rather limited. It also varies from one region to another. In the four main growing areas, the importance of size-controlling plantings ranges from 8 to 15 per cent of the growing area. In Huntingdon 15 per cent of the growing area is planted with size-controlled trees and 39 per cent of the growers declared these type of trees among their new plantings, according to the data from the Ministry of Agriculture.

The Apple Varieties

The diversification of production allows for a greater market potential as well as for an extended period of marketing. A greater choice is likely to meet more consumer tastes, reducing the need for imported apples.

In Ontario, for instance, the McIntosh is becoming less dominant in terms of both volume produced and number of trees. New varieties (such as Spartan, Empire, Idared) are becoming popular among apple growers. These new varieties accounted for 45 per cent of the total number of trees in 1979. On the other hand, McIntosh contributed to 36 per cent with Delicious 19 per cent of the total production for the same year (Table 3).

In Quebec McIntosh apples account for more than 70 per cent of total production. Growing of McIntosh is high in Quebec with 55 per cent of the total Canadian McIntosh production. This must be viewed in the context that only 19 per cent of Cana-

TABLE 2. Average and annual apple production in Quebec and Ontario, 1950-79.

Thousand Metric Ton				
Quebec			Ontario	
Year	Production	3-Yr. Average	Production	3-Yr. Average
1950	39.0	—	58.4	—
51	63.3	—	71.7	—
52	28.6	43.6	48.7	59.6
53	35.5	42.5	53.9	58.1
1954	51.0	38.4	62.7	55.1
55	102.1	62.9	82.4	66.3
56	57.6	70.2	61.1	68.7
57	51.5	70.4	65.7	69.7
1958	91.1	66.7	96.3	74.4
59	81.2	74.6	94.0	85.3
60	63.9	78.7	76.0	89.0
61	62.4	69.2	112.5	94.4
1962	122.2	82.8	104.1	97.8
63	108.1	97.6	111.3	109.3
64	76.8	102.4	133.1	116.2
65	156.1	113.7	107.8	117.4
1966	81.8	104.9	116.8	119.2
67	101.8	113.2	118.4	114.3
68	109.3	97.6	123.1	119.4
69	104.1	105.1	139.1	126.9
1970	85.1	99.5	128.7	130.3
71	119.2	102.8	128.8	132.2
72	114.0	106.1	125.3	127.6
73	89.4	107.5	92.0	115.4
1974	125.2	109.5	124.5	113.9
75	108.6	107.7	130.2	115.6
76	72.3	102.0	116.0	123.6
77	94.2	91.7	127.9	124.7
1978	101.7	89.4	142.7	128.9
79	91.2	95.7	141.6	137.4

Source: 1950-64, Fruit and Vegetable Production, Statistics Canada, Cat. #22-003, seasonal. 1965-79, CANSIM, Fruit and Vegetable Statistics, New Historical Series.

TABLE 3. Per cent distribution of apple production by variety in Quebec and Ontario, 1975-1979.

Year	McIntosh		Delicious		Others	
	Quebec	Ontario	Quebec	Ontario	Quebec	Ontario
1975	71	44	1	15	28	41
1976	71	41	2	16	27	42
1977	77	43	2	14	22	43
1978	77	40	2	19	21	41
1979	72	36	2	19	26	45

Source: Statistics Canada — Cansim

dian apples are produced in Quebec. This feature creates special problems regarding the handling, storing, processing, and marketing of one variety apple in comparison with the multiple varieties production situation existing in other provinces. The end uses and prices of apples in Quebec is obviously influenced by the dominance of McIntosh apples.

Several proposals and promotional activities are under way to diversify apple production in Quebec on the assumption that such diver-

sified production would generate more revenues for apple producers and expand market outlets. A detailed study needs to be undertaken to verify this key assumption.

A Profile of the Industry

Very little data pertaining to the apple industry are available for Quebec. Thus the aim of the survey was to collect the pertinent information and the data that could help to draw the socio-economic profile of the industry.

1. The socio-economic profile. The apple growing business is, by and large, operated by families and only three out of 54 respondents declared working on a partnership basis, mainly family-based. One orchard was declared as being owned by a company.

The average age of the orchard owner is 47 with variation from 20 to 82 years. The concentration occurs in the 40 to 59 age group with 54 per cent of the growers.

On the average the orchard is owned for 15 years. There is a high degree of association between age and the length of the period the orchard is owned. Moreover, 46 per cent of the orchards have been acquired within the last 10 years. The average age of entry, in this category, was 35 and less than half the recent acquirers were 20 to 30 years of age at time of purchase. However, it is in this group that the larger orchards are concentrated, the average size being 11.1 hectares in contrast to 6.9 hectares in the older group of producers.

This situation may be explained by two factors: First the property rights in a family-based operation are usually transferred to the son and his young age allows for greater credit facilities. Second, being restricted in terms of credit, the older buyers of apple orchards do not usually depend on apple production as sole sources of income. In fact, among those who are in the 36 and more age group and who acquired their orchard within the last 10 years, 58 per cent declared having other sources of income in contrast to only 29 per cent in the younger group.

In general, among the respondents, 59 per cent declared apple production as their main source of income. Those who are economically dependent on apple production own a substantially larger growing area (14.7 hectares on the average) in contrast to the less economically dependent group with an average of 4.2 hectares.

2. The production unit. Overall, the average size of orchard of the respondents is 11 hectares. This figure is reasonably close to the 10.5 hectare average derived by the Grower's Association list.

On average, the orchard comprises 2,150 producing apple trees with average density of planting of 194 trees per hectare (78 trees per acre). This density of planting is slightly lower than in Ontario where the average density was 217 trees per hectare in 1976, a 12 per cent difference. This may partly explain the discrepancy that exists in the yield per hectare: 16.1 tonnes in Ontario in contrast to 14.1 in Quebec, based on the three last years production average, a 14 per cent difference.¹

3. Non bearing trees. Among the 115 thousand trees declared by the respondents, 37 per cent have been planted during the last five years. This percentage is higher than the 23 per cent figure suggested by the 1971 Census of Canada and reflects the change occurring in the industry in recent years and may partially explain the decreasing production pattern observed. However, the rejuvenation process appears to be unequally spread among the growing areas. In the Rouville area this process is most observed with 51 per cent of the non bearing trees. Missisquoi and Huntingdon follow with 18 and 15 per cent respectively.

Of the 42 thousand trees planted in the last five years among the respondents' orchards, 21 per cent were planted in the previous year. Conversely, 36 per cent of the 6.5 thousand trees removed were taken out of the ground in the previous year. This implies that tree plantation is more of a gradual nature than tree removal.

¹Productivity in Quebec could be improved by using semi-dwarf trees under medium density. For example, a spacing of 4.6 x 7.0 meters (15' x 23') using semi-dwarf trees would allow for a density of 311 trees per hectare which is far greater than the present one.

An Agriculture Canada publication: "Apple Growing in Eastern Canada", estimated to five years the period required to break even with this density of planting against eight years with a density of 131 trees per hectare, commonly found in Quebec orchards. The publication further estimates a 16 per cent savings can be realized in overhead cost when using this spacing. In this context the adoption of new technology appears to be most beneficial to the apple industry.

4. Size-controlled trees. A strong preference is expressed in the survey for the adoption of size-controlled trees. About 61 per cent of the respondents declared having size-controlled trees and an average of 1,411 size-controlled trees were included in their plantings. According to the survey, 40 per cent of the trees declared are size controlled, which indicates a strong tendency toward the adoption of new technology. However, the large majority of these dwarfed trees (98 per cent) are concentrated in the Rouville and Huntingdon area with 46 and 52 per cent respectively of the total number of size-controlled trees.

This geographical concentration of the size-controlled tree can be explained by two main factors. First, growing conditions vary widely in the province, the soil, the climate, and topography may hamper the technological development and induce stagnancy. Second, the human factor: the grower's attitude toward new technology depends on a series of factors, among them research, extension work, and leadership among producers. A lack of one of these factors may be causing this unequal spread of new technology.

This situation recommends close investigation and corrective action if the reasons fall in the second category.

5. Varieties. In terms of variety a diversification process now becomes apparent and 47 per cent of the production units are now varieties other than McIntosh. This trend can also be substantiated by the fact that among the non bearing trees, 64 per cent are non McIntosh varieties. Although the respondents were not always specific enough to establish a percentage distribution of the other varieties, it appears that the diversification process is now fairly evident.

6. Marketing Quebec apples. The flow of apples from the grower to the ultimate consumer can include the packer, processor, wholesaler, and retailer. All the intermediate channels can be by-passed by the grower, depending on his level of integration and/or contract selling.

The survey indicates that 65 per cent of the growers sell their apples to a packer. These respondents declared having sold 60 per cent of their production to the packers. Since some of the respondents may have been packers themselves and therefore declared having sold their production to other marketing segments, it is expected that the percentage of the production sold to packers is higher, more likely in the 70 per cent range. The 54 growers surveyed marketed an average of 7 thousand bushels for the last crop (1979). An extrapolation of this figure gives an aggregate production of 85.9 thousand metric tonnes, which is slightly lower than the official figure of 91.2 thousand tonnes, published by Statistics Canada. This implies that some apples do not enter normal commercial market outlets and/or are sold privately.

Storage Capacity

By storing the apples the grower plays an important role by regulating the supply of apples over the marketing period. Thirty per cent of the respondents declared having

cold storage facilities and 9 per cent declared a Controlled Atmosphere storage room. The average capacity of a cold storage room is over 6 thousand bushels among the respondents and 23 thousand bushels for the Controlled Atmosphere storage room.

Forty-three per cent of the producers declared having apples in storage in mid-November; the quantity stored at that time was equivalent to 48 per cent of the declared production. In mid-January 33 per cent of the producers had in storage a quantity equivalent to 31 per cent of the crop.

The Price Paid by the Packer

The price paid by the packer is the only price not controlled by the Apple Grower's Marketing Board. The 65 per cent of the respondents who declared having sold to packers reported having received between \$90 to \$105 for their "bin" of apples. A bin usually contains 20 bushels, so that the price received ranged between \$4.50 to \$5.25

a bushel for McIntosh. The price of one bushel of McIntosh, as determined by the Grower's Board, varied between \$7.50 and \$8.50 between November and March. The margin varied from \$2.25 to \$4.00. It must be noted that this margin does not include the incurred marketing costs.

Concluding Remarks

The Quebec apple industry has been experiencing a number of changes which are vital to the development of the industry. The survey shows evidence of new technology adoption underway in terms of both types of trees and apples produced. The development of hardier types of size-controlling rootstocks would allow the province to develop its quality of production with a more diversified choice of varieties. A continuous effort is required now to induce an evenly spread technology in the province so that Quebec production will eventually increase to supply the growing markets for apples and apple products.

Macdonald Reports

STAFF COMINGS AND GOINGS

Professor Jamie Angus resigned from the Department of Agricultural Economics to accept a position as Consultant to the Canada Mortgage and Housing Corporation.

Professor Tom Beveridge has returned to his teaching duties in the School of Food Science after spending a productive sabbatic year working on the gelling mechanisms of food proteins at the University of British Columbia. In addition to taking a course in food product quality control, visits were made to all University Food Science Departments and numerous federal and provincial food related laboratories along the travel route.

Professor Clark Blackwood retired from the staff of the Department of Microbiology and was granted an Emeritus Professorship at the June Convocation. Professor and Mrs. Blackwood have taken up residence in Victoria.

Professor Eugene Donefer of the Department of Animal Science began a year's sabbatic leave on October 1. He plans to complete reports and publications resulting from the operation of the Sugarcane Feeds Centre in Trinidad of which he has been Project Director over the past five years.

Dr. Jan Gavora has been appointed part-time Auxiliary Professor in the Department of Animal Science. Dr. Gavora obtained his M.Sc. and Ph.D. degrees from the University of Nitra,

Czechoslovakia, and is employed by Agriculture Canada at the Animal Research Centre in Ottawa. His area of interest is poultry genetics, particularly the genetics of disease resistance.

Professor Stuart Hill of the Department of Entomology will spend his sabbatical year strengthening the program of the Ecological Agriculture Project and in teaching improvement, research, and publications. He will also travel to other Departments of Entomology and research establishments.

Dr. Walid Khayrallah has been appointed Faculty Lecturer in the Department of Plant Science. Dr. Khayrallah holds B.Sc. and M.Sc. degrees from A.U.B. Lebanon. Since obtaining his Ph.D. from McGill in 1976, he was coordinator for food

of legume projects in North West Africa and established the Algerian Food Legume Research program for the International Development Research Centre in Ottawa.

Professor Robert Kok of the Department of Agricultural Engineering plans to complete a major part of a textbook on food engineering during his sabbatical year. He also plans to pursue further development of a computerized mapping system and develop future research projects. He will take short-duration visits in Canada, the United States, and Europe to visit research facilities.

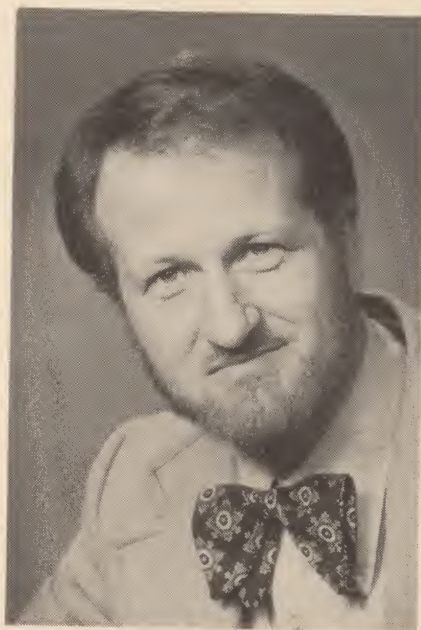
Professor Robert MacLeod has returned to the Department of Microbiology from a year's sabbatical leave at the Boyce Thompson Institute for Plant Research at Cornell University where he was engaged in learning techniques of genetic engineering. At the Institute he was associated with a group endeavouring to transfer genes for nitrogen fixation in bacteria to plant cells, a project which, if successful, could have tremendous implications for world food production. During the year, Professor MacLeod presented invited seminars based on his research program at Macdonald and Well, the University of Maryland, the University of California at Davis. He also gave two lectures in summer course on Microbiology at the Marine Biological Laboratory at Wood's Hole, Massachusetts.

Donald Martin of the Department of Plant Science was granted a year of absence from June 1 for a year period in order to undertake field work in Morocco.

Perce McKinley has joined the Department of Agricultural Chemistry and Physics as an Auxiliary Professor on a part-time basis, continuing his present position with the Department of National Health and Welfare, Health Protection Branch, Ottawa, as Director General, Food Directorate. A native of Port Arthur, Ontario, Dr. McKinley is an undergraduate and graduate student at Macdonald.

Professor W.E. Sackton of the Department of Plant Science will spend his year of sabbatic leave on the campus doing research, both personal and with graduate students, on mechanisms of seed infection by plant pathogens and effects of environment on disease development. He will also be writing research papers on accumulated data. In addition, he will participate in two international conferences — one in Italy, the other in Australia.

Professor Peter Schuepp has been appointed Chairman of the Department of Agricultural Chemistry and Physics. Professor Schuepp came to



New Chairman Dr. Peter Schuepp.

Macdonald in 1969 from the University of Toronto where he had obtained a Ph.D. and done post-doctoral work on physics as applied to the formation of hail and precipitation in clouds. At Macdonald his research interests have shifted closer to the ground. They involve studies of how heat, moisture, gases (such as CO_2) and pollutants are transferred in the natural environment and how such transfer affects the development in plants.

Daphne Sidaway-Wolf, who has been appointed Faculty Lecturer in the Department of Agricultural Engineering, obtained her B.Sc. in Agricultural Engineering from McGill in 1980. She immediately started

working toward her Masters degree in the Department of Agricultural Engineering and worked part-time as a computer programming consultant. Ms Sidaway-Wolf's main field of interest is food engineering and the use of computers to determine the best method of processing food.

Professor Howard Steppler returned to the campus in June to assume the chairmanship of the Department of Plant Science. From September 1980 until his return he had served as Director General and interim of the International Council for Research in Agroforestry, which has its headquarters in Nairobi, Kenya.

Professor Robin Stewart has returned to his teaching duties in the Department of Entomology and to the Chairmanship of the Department after spending a sabbatic year doing research on ecological and educational aspects of entomology and crop protection in Britain. In addition to writing research papers and visiting research and teaching establishments in the U.K., he taught a senior undergraduate course in Integrated Pest Management at Glasgow University.

Professor Roger Titman's year of sabbatic leave will allow him to again become involved in field research on ducks and to catch up with literature and methodology. To this end he plans to continue the study of activity, energetics, and physiology of selected duck species during the moult and overwinter at the Delta Waterfowl Research Station in Manitoba and at the University of California in Davis. Between field trips he will assist his graduate students in the Department of Renewable Resources with their field work.

Professor Philip Warman resigned from the Department of Renewable Resources to accept a position as Professor of Soils with the Nova Scotia Agricultural College in Truro.

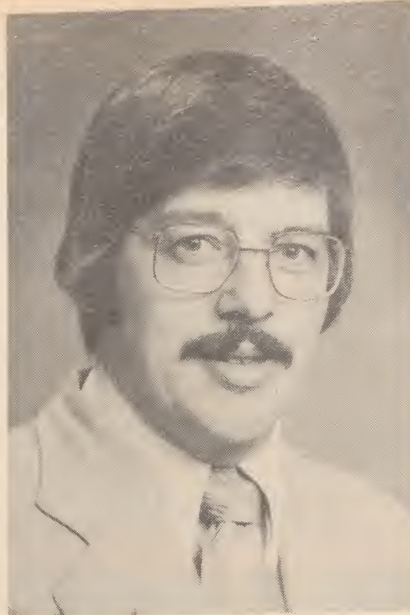
CANADIAN FARM MANAGEMENT ASSOCIATION

"It is with much pride, enthusiasm, and some cautious optimism that I have recently accepted the position of President of the Canadian Farm Management Association," said Marcel Couture, Assistant-Director of the Diploma Program at Macdonald, of his new appointment and continued, "I am proud to have been given the opportunity to contribute in setting up this Association and to be a part of a movement which has the potential to play a major role in Canadian agriculture in the years ahead."

Mr. Couture became the second president of this new Association while attending the Annual Conference of the Agricultural Institute of Canada at Brock University in St. Catharines, Ontario, in August. The AIC is a professional organization of Canada's agricultural scientists, educators, and administrators, and it was during the 1980 meeting held in Edmonton that the Canadian Farm Management Association was formed with the first President being Dr. Jim McKenzie of Agriculture Canada.

Many years of work and discussion led to the setting up of an informal group which organized very successful farm management sessions at each of the previous three AIC Annual Conferences: Regina in 1978, Fredericton in 1979, and Edmonton in 1980. These sessions provided an excellent opportunity for people interested in farm management across Canada to meet and to exchange views on topics such as banking, agricultural credit, and the teaching of farm management courses, an area of particular interest to Mr. Couture. As a result of these successful sessions, the Association was formed with the following objective in mind: "To work toward the enhancement of the farm management profession in Canada."

In order to meet this goal, the membership is open to all those who have an interest in the farm management profession in Canada, including farm managers, teachers, researchers, consultants, agricultural appraisers, extension workers, and others. At the present



Mr. Marcel Couture.

time, the Association has a membership of about 60 people, e.g., those who attended the Edmonton meeting in August 1980 and the St. Catharines meeting in 1981.

In concrete terms, the Association will soon begin the publication of a Farm Management Newsletter which will be distributed to the membership. The Association also intends to have a full program of its own under the umbrella of the AIC in Vancouver (site of the next Annual Conference) in July, 1982.

Mr. Couture said that a copy of the proceedings of the St. Catharines session is available at a cost of \$10. This nominal fee will also purchase your membership in the Association. Copies of the proceedings can be acquired by writing to the Secretary of the Association, Dr. Len Bower, Department of Rural Economics, University of Alberta, Edmonton, Alberta, T6G 2H1.

If you would like to have more information on this Association, please write to Dr. Bower at the above address or to Mr. Marcel Couture at Box 335, Diploma in Agriculture Program, Macdonald College, Que., H9X 1C0.

UPDATE ON THE FALCON PROGRAM AT MACDONALD

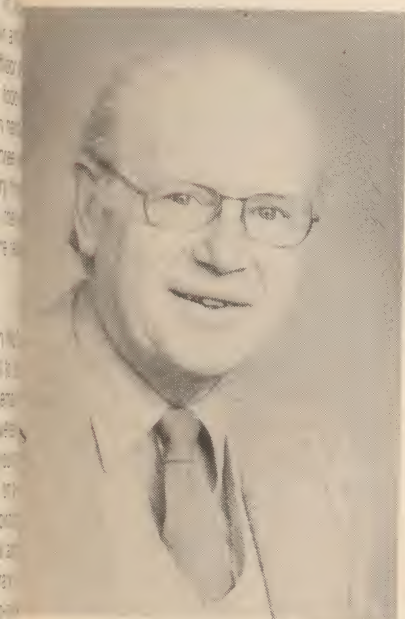
Professor David Bird, Director, is enthusiastic about the fact that 1981 marks yet another year in which the Macdonald Raptor Research Centre has played a significant role in birds of prey conservation in Quebec. This year's Peregrine release program was very special in that Peregrine Falcons were once again residing on Montreal's Sun Life Assurance building. On June 29, three falcons, one female and two males of 48 days of age, bred at federal breeding facilities in Alberta, were released from their artificial nest cage on the 20th floor of the building. Although food was supplied to them by unseen hands, the three birds took about three weeks to acquire the necessary flying and hunting skills to catch their own food on the wing. The entire release went extremely well.

Peregrines lived on the Sun Life Building from 1936 to 1952 — the same identifiable female and three different mates covered that time span. Twenty-two young were raised during those years on a diet of pigeons and shorebirds caught in the port of Montreal and surrounding city environs. Contrary to the opinion of most pigeon-lovers, the falcons had no impact whatsoever on local pigeon populations.

It is hoped that with the present restoration program a pair of falcons will once again adopt Montreal as their home. In the past five years, 23 falcons have been released in the Macdonald Campus area, but so far none has returned here. With the paucity of cliff-like ledges in our area, the falcons probably find the skyline of Montreal more to their liking. Additionally, the mortality rate of young falcons after leaving the nest naturally is about 70 per cent in their first year. Captive-reared birds may have an even higher mortality rate. Of three falcons released from the roof of the Ste. Annes Hospital for Veterans last year, one was immediately struck and killed by a car.

The Raptor Centre continues to thrive with the addition of more graduate students and, more recently, a facelift. The latter was in

preparation for the hordes of raptor enthusiasts expected to visit the Centre on the last day of the annual Raptor Research Foundation conference to be hosted by the Centre in Montreal in late October. There will be a two-day symposium on Bald Eagles and Ospreys following by a three-day conference on birds of prey. The latter is composed of paper presentations, workshops, films, and a banquet.



Dr. D.K. McE. Kevan.

OLD MEDAL FOR DR. D.K. McE. KEVAN

Dr. Keith McE. Kevan, Department of Entomology, McGill University (Macdonald Campus), and Director, Lyman Entomological Museum and Research Laboratory has been presented with the Gold Medal of the Entomological Society of Canada for 1981. The medal is presented annually for outstanding achievement in entomology in Canada. The presentation was during the annual meeting of the Society in Banff, Alberta. Dr. Kevan then presented the annual address by the Gold Medal recipient.

Dr. Kevan joined the Macdonald College faculty in 1958 as Professor and Chairman of the Department of Entomology, and shortly afterward Chairman of the combined Departments of Entomology and Plant Pathology. He is known worldwide as an authority on orthopteroid insects (grasshoppers and their

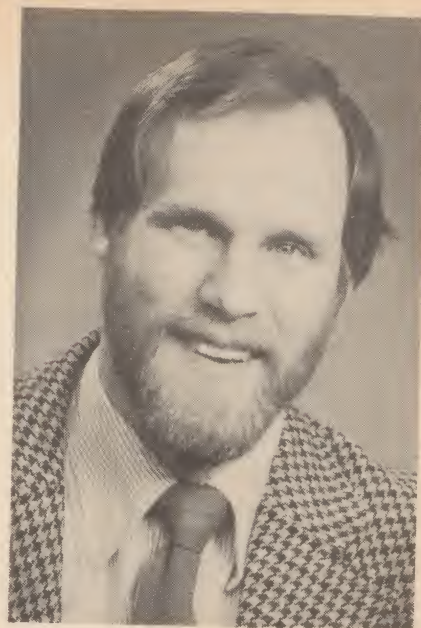
relatives) and, as well, carried out pioneering work on soil fauna. He has been instrumental in establishing the Lyman Entomological Museum at Macdonald College and in its development as one of the primary centres for research in insect taxonomy in Canada. He was also instrumental in establishing the Biological Survey of the insects of Canada, which is sponsored by the Entomological Society of Canada.

Dr. Kevan's research in entomology has produced more than 400 publications, including several books. He has also directed the research of about 35 graduate students.

Dr. Kevan is a Fellow of the Royal Society of Edinburgh, the Royal Entomological Society of London, the Entomological Society of Finland, and is an Honorary Member of the Pan American Acridological Society. He is a past President and Fellow of the Entomological Society of Canada, a member of several more biological and entomological societies, and is on the editorial boards of a number of international entomological journals.

HOW'S ENROLLMENT?

Registration day has come and gone for another year and again I have been besieged by the inevitable question, "How's enrollment?". There are some years when I find the question more tolerable than others. This is a good one. Despite the very serious disruptions caused by the mail strike this past summer, I am very pleased with the registration statistics for this year. The overall number of students in all the undergraduate and diploma programs is up by 80. This is a percentage increase of 9.2 per cent over the same time a year ago. The increase is spread fairly evenly throughout the whole Faculty with all areas showing at least minor increases with the exception of second year Agriculture and third year Food Science. To counter the slight decreases in these areas there are very satisfying increases in first year Food Science and in the Agricultural Engineering Program in all years. The total student population of the Faculty is rather interesting and the 1,125 total consists of 189 M.Sc.



Registrar Stephen Olive.

and Ph.D. students, 535 B.Sc. (Agr.), 105 B.Sc. (Agr. Eng.), 155 B.Sc. (F.Sc), 103 Diploma in Agriculture, and 38 special and visiting.

There seems little doubt then that the answer to the inevitable question is: enrollment is doing fine and getting better all the time. I am looking forward to an exciting year with lots of new faces and ideas and hoping for better things in the future.

Stephen Olive Registrar

READER REACTION

An article by Louis Payette in the June 1981 issue called, "Potential for Gasohol Production in Canadian Agriculture" was pointed out to me by Walker Riley, formerly a Macdonald staff person. I am glad that this article was written early in the federal government funded study.

In one sentence, "This stillage has proved to be a good nutritive source of animal feed and can be fed directly to the livestock." And yet, "In central Canada, Ontario farmers grow a quantity of grain corn that could support an ethanol industry, but most of the crop is needed in the livestock industry leaving almost no opening for the production of ethanol." In fact, one third of the feed grains could be processed through a fuel alcohol still, the stillage fed to cattle, and the ration will be balanced without the need for many acres of soybeans grown as a protein supplement.

I am surprised that the article makes no mention of unused agricultural land in Canada. Ontario is the most populated province in Canada, and yet an agricultural land inventory made by the Ontario Ministry of Agriculture and Food in 1977 revealed that over 19 millions acres of land is still available for expansion of farming.

The yield of ethanol per acre of potatoes in this article refers to Canadian production of table-stock potatoes. No plant breeding has been done here to develop a fuel crop, but special high starch potato varieties have been developed in Europe. These can yield over 400 imperial gallons of ethanol per acre. But using the most conservative estimate of the Canadian Wheat Board study, on the 19 million acres of unused agricultural land in Ontario, we see that Ontario alone could provide 4 billion imperial gallons of ethanol. This is without considering one third of Ontario feed grains and a large variety of food processing wastes which could be raw material for additional product.

At this point it is necessary to know that gasoline engines use only about 22 per cent of the energy available in that filthy liquid. Engines have been designed to use 42 per cent of the energy available in ethanol. Even the relatively primitive engines currently manufactured in Brazil to work on straight ethanol use only one tenth more fuel by volume than their gasoline predecessors.

Canada in 1977 used about 8 billion imperial gallons of motor fuel. Ontario's agriculture alone could supply more than half of Canada's motor fuel needs without going to bed with petroleum to receive the 90 per cent gasoline needed for gasohol.

I note that the Macdonald Journal is an excellent source of useful information. Perhaps you could publish this letter to balance Mr. Payette's article with "another view".

**Mart Kirik, P. Eng.,
Agricultural Engineer
Northeastern Ontario
Ontario Ministry of Agricultural
and Food.**

by Susan Johnson Research Assistant Ecological Agriculture Projects

The Ecological Agriculture Project (EAP), since it began seven years ago, believes that it has had a continuing and increasing influence on the Macdonald community, as well as on farmers, government policy makers, researchers and students in the rest of Canada and around the world.

The project grew out of a concern by some — which still persists — that the major problems within the food system are not being solved by approaches currently being applied. One of these problems is the loss of soil productivity through erosion, salinization, and loss of organic matter. According to the Agricultural Institute of Canada, "a crisis has developed with regard to the conservation of prime farmland". Soil losses of up to 50 tonnes per hectare per year have been measured under corn crops in Ontario. Dr. Rennie, Chairman of the Soil Science Department of the University of Saskatchewan, reports that saline seepage on about a million hectares of prairie land under continuous wheat/fallow rotation has reduced crop yields by an average of 50 per cent.

Another issue is the concentration of ownership in the food system. Both the manufacture of agricultural inputs (tractors, fertilizers, pesticides, etc.) and the processing and marketing of agricultural products are controlled by a few private companies. In some agricultural sectors, these companies are having an increasing influence on how farmers manage their farms. In the United States, there is concern about the concentration of land ownership. A former official in the United States Department of Agriculture, Donald Parrlberg, warned that "We are developing a wealthy, hereditary landowning class, which is contrary to American traditions". Already, five per cent of the landowners control 48 per cent of U.S. farmland.

A third concern is the pollution and health hazards posed by the increasing use of pesticides and by improper waste handling. Another is the loss of food quality resulting from overprocessing. Although all these problems are generally considered as isolated phenomena, more and more people are starting to recognize that they are inter-related and are asking some fundamental questions about our "modern" agriculture. At the same time, researchers, farmers, and policy makers are beginning to search for methods of producing, processing, and distributing food that will preserve the productivity of our soils, the stability of rural society, and minimize health and environmental problems, while providing nourishing food for all Canadians. The purpose of the Ecological Agriculture Project is to promote this development towards an "ecological", sustainable agriculture.

The hub of EAP is its resource centre, which comprises over 400 vertical files, 1,000 books, 70 journals, and audio visual materials with both practical and theoretical information on not only ecological agriculture but also on renewable energy, international development, waste management, rural sociology, and nutrition and health. A considerable amount of staff time is spent collecting, reviewing, and cataloguing a constant flow of books, reports, articles, and scientific papers. The collection is used by students and staff at Macdonald and by a wide range of people from Quebec and from all parts of the world.

EAP staff members have been instrumental in generating new food and energy policy directives, both in Canada and elsewhere. Some of our staff conducted a study for the Science Council of Canada on Sustainable Food Systems. They have also been called upon to advise or prepare reports for a number of organizations and government departments including: the Agricultural Resources Study of the Government of New Brunswick; the Centre for Energy Studies at the



Over 400 vertical files, 1,000 books, and 70 journals have been assembled in the Ecological Agriculture Project Centre.



At EAP's summer demonstration garden, staff members discussed ecological gardening techniques with the public.

Technical College of Nova Scotia; Environment Canada; the Farm Energy Conservation Project of Energy, Mines and Resources; the New Alchemy Institute in Massachusetts; the Quebec Environmental Coalition, and many others.

An important part of EAP's function is to maintain contact with other individuals and groups around the world interested in sustainable food systems. Our file of more than 2,000 names from at least 30 countries expands daily. On campus, EAP staff members help organize seminar series on ecological agriculture and international development, as well as a food cooperative. They are also frequently asked to speak on ecological agriculture on radio and at local, national, and international gatherings, such as the First Global Futures Conference held in Toronto in 1980.

The staff of EAP is optimistic about the future of North American agriculture. The Agriculture Institute of Canada's 1981 conference theme of "Sustainable Agriculture" is one indication of changing attitudes. The United States Department of Agriculture reports on organic farming and on the structure of agriculture in the U.S. are two others. In Quebec, there is a growing interest on the part of some officials in the Ministry of Agriculture in ecological food production and the preservation of the small farm. Research on the biological control of pests, on ecological soil management, on systems for recycling wastes, and on solar technology for the farm are ongoing. EAP sees its role as encouraging this process of change.

The EAP staff would like to thank the Macdonald-Stewart Foundation for its continuing support through the years. Requests for information about the project, or on specific subjects should be addressed to:

The Ecological Agriculture Project
Box 225
Macdonald College
Ste. Anne de Bellevue, Que.
H9X 1C0

The Family Farm



Published in the interests of the farmers of the province by the Quebec Department of Agriculture.



SECOND SYMPOSIUM ON RABBIT PRODUCTION

"Here is a production with an enormous potential." These are the words expressed by Mr. Wilfried Holtmann, President of the Animal Production Council on September 11, during a symposium on rabbit production.

Under the theme "Towards an Increased Production" this meeting was held at the Bonaventure Hotel in Montreal with some 250 people in attendance.

Animal Behaviour

According to Mr. Alain Sylvestre, who is responsible for the rabbit division in the Quebec Ministry of Agriculture, Fisheries, and Food, the analysis of rabbits in freedom is probably the best information leading to an understanding of their fundamental behavior. To get increased production, all the growers who are going toward commercial hutches must have a good knowledge of this sensitive and fragile animal. It has been observed that any change in the surrounding air, in the feed, or in the environment can cause a lot of stress, even death for some. Furthermore overpopulation in hutches can have some critical and negative effects on their overall resistance.

Rabbit Feeding

Mr. François Lebas, engineer and agronome, Managing Director of the magazine *Cuniculture*, President of NRC rabbit and in charge of research at the Institut Nationale de Recherches Agronomique in Toulouse, France, came to acquaint the audience with a part of his experience acquired over a period of 15 years in the field of raising and feeding of rabbits. He stressed the

point that balanced feeding is indispensable to the success of any raising of rabbits. It is useless to prepare a perfectly balanced meal of feed if it must be put together with raw material of poor quality and if the surroundings and sanitary conditions in which the rabbits live are deficient. His conference dealt with the particular functioning of the digestive tract of rabbits, their basic needs, the feed rations and efficiency.

Professional Interview

Mr. Alain Sylvestre reminded the audience of the importance of an interview where the producer knows and possesses the data on his enterprise (birth-mortality-feeding) even if the interview's only purpose is the completion of a registration form reinvestment and orientation of the project as a whole or to correct a defective system or to sign a service contract (buying, construction, cages). A complete register will permit a rapid solution to the problem.

Having all the required data, a visit to the hutch, except for ventilation cases, will be excluded which will decrease the risk of disease.

Improvement of the Productivity of the Does by Good Utilization of Their Reproductive Capacity

Many unknown points remain, particularly at the level of certain nutritional and climatic factors. However, Mr. Pierre Pilon, veterinarian, responsible for rabbit and sheep preventive medicine of the Quebec Ministry of Agriculture, Fisheries, and Food at St. Hyacinthe remains confident. Success is possible when one uses certain physiological data and certain raising techniques. In his talk he reminded the audience

that it is around the age of three months that certain females may become pregnant, indicating the necessity to separate the males from the females.

He also indicated that the young males that are too fat are never good sires and that it is recommended that all animals kept for reproduction, males and females, be raised in the same surroundings since the odour from the males permits the acceleration of the sexual development of the young females.

Investigation on the Mortality of Young Rabbits

After having noted that the mortality of young rabbits before weaning creates losses ranging from 20 to 30 per cent, Mrs. Christiane St. Jacques, veterinarian in the animal pathology laboratory of the Ministry at Rock Forest, has identified the causes and analyzed the possible solutions to reduce these losses. She has indicated, particularly, that many cases of miscarriage are unnoticed because the female eats the underdeveloped rabbits and the placentae residues. As well she said the mortalities in the nest are generally high during the first two weeks after birth. Finally, it is at weaning time that the rabbit is the most vulnerable because of the absence of antibodies from the mother's milk, and that acclimatization saps part of its energy.

"Patience, a lot of Patience, and Love"

This is the message that Mrs. Denise Brassard, rabbit producer from St. Armand, delivered. Established three years ago, she warned her audience that raising rabbits is not as easy as it might appear. The production of rabbits on a

commercial basis requires a lot of time, a lot of work, observation and perseverance if one wants to reach a financially satisfactory level of productivity. Thanks to a video-cassette montage, Mrs. Brassard took the audience around her setup while speaking of the difficulties that she has encountered.

A great deal of care, attention, care for details — these would be, among others, the primary qualities that a producer should have for this type of production which can be the most interesting but also the most complex one that exists.

Other species are established in a milieu which offers a protection for the raising of the young such as stumps, perforated boards, etc. Since the natural milieus are getting more and more rare, the expansion of the local populations of wild insects is difficult. One even observes that the density of their population decreases from year to year, all the more so because a large number of wild plants which offer nectar and pollen to these insects early in the spring or at the end of summer are destroyed either by herbicides or mechanically. Thus, many researchers try to develop management methods or the domestication of certain pollinators in order to have them easily available. This is the case notably of the leaf-cutter bees that in Alberta are housed in mobile hives for the production of alfalfa and clover seed. Other wild insects known for their speed and their tolerance to poor climatic conditions are being domesticated in the United States for the pollination of fruit trees which flower early.

In summary, whether one is a beekeeper or a farmer, researchers consider that efforts must be made to protect pollinating insects because their total disappearance would risk the destruction of several levels of the agro-food chain. Forage plants which feed the animals have a great need for specialized insects to produce seeds.

International Salon of Agriculture and Food: Participation of Quebec Breeders

The 28th International Salon of Agriculture and Food will be held from November 27 to December 6, 1981, at the Olympic Park in Montreal. The presence each year of a large number of quality animals on show has always contributed greatly to the reputation of this event whose breadth and importance never ceases to grow. The International Salon has become an open fair for breeders from the outside. In addition to Quebec breeders, many producers coming from Ontario and the

ARE POLLINATING INSECTS IMPORTANT?

Pollinating insects are not only useful in agriculture but even sometimes indispensable. In fact, bees, bumblebees, leaf-cutting bees, and also a few flies are at the basis of the formation of many fruits and vegetables, without taking into account the honey which is produced by the domestic bee.

Recent studies conducted by researchers at Université du Québec à Montréal and supported by the Quebec Agricultural Research Council have demonstrated that the pollinating insects are responsible for nearly 90 per cent of the benefits obtained in agricultural production. As well, a similar study conducted by the United States Department of Agriculture estimated that 30 per cent of the American food gained directly or indirectly from insect activity.

Role of the Pollinators

Most of the vegetables and all the fruit come from the fertilization of female cells, the ovules, by male cells. Now, the role of pollinating insects is, in this regard, to carry the male cells of a flower, the pollen grains, toward the ovules. The pollination is thus the preliminary phase after which the development of the fruits can begin. Even though the wind can sometimes produce the same operation, it is nevertheless true that for many plants, notably fruit trees, pollination is produced only by insects.

Fruit Production

is due to the activity of domestic bees that the apple growers' or-

chards bear fruit in the fall. Indeed, apple trees require cross pollination because the fertilization of these fruit trees can take place only between flowers of different varieties. There would not be any crop were it not for the pollinating insects which favour the transport of the pollen from one tree to another. Wind is incapable of carrying the pollen for the required distances. This is the reason why many apple growers place domestic bee hives in their orchards in the spring.

On the other hand, the authors of this study estimate that the importance of insects varies from one culture to another. Thus strawberry flowers can produce fruit without the help of insects. A large proportion of them are of poor quality, while the fruits which have been visited by pollinating insects are almost always perfect. Therefore, if large strawberry plantations are practiced and if there are no honey-gathering insects around, it is recommended that pollination be assisted by placing a few hives in your area. The same conclusions can be applied for raspberry and blueberry plantations.

Pollinators

Of all the pollinating insects, the honeybee is the best known because it is easily domesticated. However, many other species are specialized for the purpose of pollination of certain plants existing in the wild. They are, for the most part, species which live on the soil near ditches and which develop small colonies.

Maritimes participated in various competitions in 1980. It is, therefore, right to say that the level of competition during the judging never ceases to increase. Furthermore, it is important to remember that the fall-out in publicity goes far beyond the Quebec borders by the press and the visitors from afar who attend and frequent the Salon.

Timetable For the Judging

As preliminary information, here is the timetable for the judging that will take place at the Stadium or at the Velodrome at the Olympic Park.

STADIUM (level 100)

Saturday, 28 November
10:00 a.m., Small Animals
Monday, 30 November
10:00 a.m., Sheep: Hampshire, Suffolk, Leicester
Tuesday, December 1
10:00 a.m., Sheep: N.C. Cheviot, Oxford, Dorset
7:30 p.m., Auction sale of purebred sheep
Friday, December 4 (Continuous judging)
10:00 a.m., Pork: Yorkshire, Landrace, Duroc, and Hampshire
7:30 p.m., auction sale of purebred swine
Saturday, December 5
10:00 a.m., goats.

VELODROME

Monday, November 30
10:00 a.m., Dairy cattle: Ayrshire, Jersey
1:30 p.m., Beef Cattle: Limousin and Simmental
Tuesday, December 1
10:00 a.m., Beef Cattle: Charolais, Hereford
4:00 p.m., Steers
7:00 p.m., Auction sale of steers
Friday, December 4
10:00 a.m., Dairy Cattle: Holstein, Canadian
1:30 p.m., Beef Cattle: Aberdeen Angus, Shorthorn
Saturday, December 5
9:30 a.m., Young Farmers.

Duration of Stay of Animals at the Salon

As far as the presence of the animals at the Salon is concerned, it is important to point out that the animals are divided into two groups and that their presence at the

stadium will be as follows:

Ayrshire, Jersey, Hereford, Simmental, Charolais, Limousin, as well as sheep, must enter the Salon on Thursday, November 26, 1981, or Friday, November 27 and be removed on Tuesday or Wednesday, December 1 and 2.

As far as the Holstein, Canadien, Aberdeen Angus, and Shorthorn cattle, swine, and goats are concerned, they will enter the Salon on December 2 or 3 and will be removed December 6. Only the small animals will stay during the full duration of the Salon.

Symposium on the European Foul Brood: Beekeeping a promising future

Bees, it is well recognized, are pollinating insects par excellence in agriculture. Without these small animals, which more often than not are bothersome to us, there would not be any more apples, plums, cherries, strawberries, cucumbers, etc.

The specialists even estimate that the worth of bees to agriculture is easily 15 to 20 times superior to the value of the honey that one can harvest. Therefore, any disease that affects the productivity of the bees can have grave repercussions on agriculture in general. That is to say, in order for agriculture to be healthy, it is necessary that apiculture also be healthy.

The European Foul Brood

Specialists from several countries such as France, England, the United States, and Canada, gathered in Quebec city on the 19th and 20th of October in order to give their observations regarding a bee disease that is still the object of much controversy — European foul brood.

The International Symposium on European Foul Brood, is organized jointly by the Quebec Federation of Beekeeping Associations and the Ministry of Agriculture, Fisheries and Food, with collaboration with the Faculty of Veterinary Medicine of the University of Montreal, permitted the 150 participants to familiarize themselves with the origins, the prevalence, and the control of this disease of the brood.

A Nutrition Problem

Nutrition appears as one of the first factors among the causes favouring the appearance of European foul brood. Aristotle discovered the infection and made a connection between the appearance or the manifestations of the disease and the lack in nutrition. So, the addition of fresh pollen can intervene as a preventative measure and favour the spontaneous suppression of the infection.

Race and climate also constitute determining factors in the resistance of bees to European Foul Brood. For example, Italian bees and their hybrids are most resistant to the disease because of the important activity of their cleaners. As far as the climatic conditions are concerned, they can be a source of stress to the bees in search of their food. The appearance of the disease generally manifests itself in the spring or at the beginning of summer, but it can be seen reappearing annually in the same colonies.

Control Methods

Most of the beekeepers are using Terramycine R as a preventive measure and when the disease makes its first appearance. This antibiotic which is administered in the syrup or in powdered sugar, has little effect, however, when the disease has spread.

When the brood is attacked by European foul brood, the means used are destruction by fire, by burning of the infected combs, quarantine, a change of the queen, chemotherapy, and ethylene oxide fumigation. In this last case it has been noted that the colonies which are placed in the fumigated hives repopulate more rapidly; furthermore fumigation slows down the appearance of the disease.

Regular integrated inspection of the apiaries and the creation of favourable conditions for the sound development of the bees constitute the key elements to prevent the development of European foul brood. In practice, beekeepers must, therefore, select bee varieties that are best adapted to the site, to supply them with a sufficient amount of food, and to insure the maintenance of strong colonies by renewing the queens frequently.

QWI

Meeting with the Cercles de Fermières

The Congrès 1981 of the Cercle de Fermières was held at the University of Sherbrooke in August, promoting the theme "Ensemble continuons". Over 950 delegates from throughout the province assembled under the leadership of Mme Marie Tremblay of Iberville, Quebec.

On Banquet Night local dignitaries and representatives from other provincial women's organizations were invited. The Quebec Women's Institutes were represented by Mrs. Gerald Cascadden of Lennoxville, Provincial Treasurer, and Mrs. Sterling Parker of North Hatley, QWI First Vice-President.

A musical evening followed the banquet when the delegates and visitors enjoyed selections rendered by Le Choeur Héritage de Sherbrooke, interspersed with the presentation of awards for handicrafts.

At this time arrangements were made for the full QWI Executive to meet in September with the Executive of the Cercle de Fermières in the comfortable atmosphere of Domaine St. Laurent (the former King's Hall, a school for girls) in Compton.

Over the dinner hour plans were made for Quebec's part in Canada's hosting of the ACWW Conference to be held in Victoria, B.C., in 1983.

**Mrs. S. Parker,
QWI First Vice-President**

Quilt Donated, Not Sold

Wilton WI donated their quilt to CanSave. Editor's apologies for using the word "sold" in the September Journal.

Wacky Cake

- 1-1/2 cups sifted pastry flour
- 4 tablespoons cocoa
- 1 teaspoon baking powder
- 1 teaspoon baking soda
- 1/2 teaspoon salt
- 1 cup fine white sugar
- 1-1/2 teaspoons vanilla
- 1 tablespoon vinegar
- 5 tablespoons salad oil
- 1 cup lukewarm water

Sift dry ingredients into ungreased 8 x 8-inch pan. Make 3 holes. Pour vanilla into one, vinegar into another, salad oil into the third. Pour water over the top and stir well.

Bake in a 325°F. oven for 45 to 50 minutes.

Cool and ice with favourite icing.

**Mrs. Ruby Knights
Sutton WI.**

Dear Members:

I hope this past summer was also for you one of the greenest, full of flowers and, even today with the mingling of some falling leaves, it seems that all creatures praised Mother Nature for the gifts she gives so abundantly! Not so generous was the arrival of your reports, my dear ladies! Only seven counties out of 20 mailed something, including some reports of May. But I hope during the following months that your meetings will bear many substantial results and you will have me in mind and let me know about your activities.

Lakefield WI's Connie Vipond finished an afghan and was thanked for it. It is named Wildflower Garden and is being sent to CanSave. That organization also asked them to send in used stamps.

Nineteen members of **Upper Lachute East End** answered the roll call by bringing an article to exhibit at the Fair or pay a 25-cent fine. The QWI Pioneer books were sold and orders were taken for more. The guest speaker was Mrs. D. Plante who spoke about weaving. Of special interest were the cardboard looms that can be made very easily to weave smaller items.

Arundel members had a guest from the Rochester area in England and there was an interesting exchange of ideas and information about WI work during the refreshment period. As roll call they chose to make contributions to: the library fund, Health Workshop, Oxfam, and the Canadian Cancer Society. The Agriculture Convener, Terri Thornicroft, read an article on Quebec young farmers and how they are unable to raise capital due to the very high interest rates. The government will supply interest-free loans for up to \$50,000 if the location is approved by them. Education Convener, Hazel Thomas, reported that the library was ready to move to new quarters, and a work party of willing volunteers was ready on the day to assist with the moving. The program of Citizenship Convener, Pauline Graham, Show and Tell, produced some most interesting bits of memorabilia. There was a wooden buggy jack — something that most of the members had never seen. Nippon china hair ties which still contained curls of hair from many of the owner's ancestors, a doll-size chest of drawers made by the great-grandfather of a member for his daughter which had been played with and treasured by each succeeding generation. Another member produced a cape with jet beads that had been worn by an ancestor in 1879, and she also had a case with calling cards that were used by the same lady when she



Stanstead County's August meeting was held in Ayer's Cliff. After the meeting, as may be seen, members enjoyed the opportunity to catch up on summer news and the delightful refreshments.



went visiting. Other items included a lady's gold pocket watch and chain, an ebony elephant, a flint arrowhead, and a mug of ruby cut glass engraved with the word "Arundel". There was also a chestnut roaster with an embossed brass lid which had been used for generations on an open hearth fire.

Grenville's conveners' reports were interesting. The members were told the story of the McIntosh apple, how to use manure and fertilizer in gardens, and the vitamins and nutrients found in skim milk powder.

The agriculture meeting at **Jerusalem-Bethany** mentioned that Benny Hammond, a local farmer, had won the Junior Canadian Plowing Championship at the recent match held at Agassiz Experimental Farm in Chilliwack, B.C. Mr. Ham-

mond represented Quebec at this contest. Another item of note was that the local square dance group (Lachute 4-H) placed second in the Quebec Young Farmers competition held in Howick. This group has danced at two senior citizens homes recently: in the Pavillon and the Lachute Residence. Mrs. McGibbon gave an Excellent report from the convention. Copies of the QWI Pioneer book were sold and one copy was autographed and sent to Jessie Kettle, a Charter Member of the branch. There is a brief resume of her contribution to "Home and Country" in the book. Mrs. Simon Wilson, Agriculture Convener, introduced Mr. Merlyn Evans who gave the group a most detailed and practical talk on the use of insecticides, fungicides, and various dusts available for use in gardening to combat a multitude of problems. Mr. Evans did point out emphatically

the necessity of reading the instructions on the containers very carefully and not to change the suggested strengths of the solution.

The Education Convener of **Brownburgh** WI suggested that since this is the year of the disabled they pass a motion that each member raise \$5 toward a donation to Capar. They were invited to the summer home of one of the members where they entertained another branch.

Members of the **Dalesville-Louisa** WI answered the roll call. "Why am I glad to be a Canadian?" and Mrs. May Wilson, Agriculture Convener, told of a program she had seen on television about a farmer whose calves were born dead. The cause was traced to P.B.B. in the feed that was fed to the cattle. It also caused symptoms of harmful disease in

humans, even to a little boy seven months old. They have tried to have the feed taken off the market but so far without success.

The Agriculture Convener at **Pioneer** pointed out ways to plant for greatest efficiency in the garden, the use of potatoes for economical and nutritious meals, and gave out recipes using potatoes. An apple a day for good health was also remembered.

"The **Franklin Centre** WI campaign to have women's hygienic products and intimate foundation garments banned from television commercials is going well," said Mrs. J. Sabetta, "but, if we have more names in the form of petitions supporting us, then we could make an even greater impact on the manufacturers of these products that I intend writing to." A cookie contest was won by Mrs. Moneypenny. The branch had letters and photographs from two penpals, one from Australia, the other from England. They also enjoyed a picnic with their families at the home of Mrs. Sabetta on Covey Hill with a good time, good food, and good friends.

Mr. James Summerton was the special speaker at **Aubrey-Riverfield**. He told the members about the Junior Farmers trip to three Ontario farms where they received splendid hospitality. Roll calls for different meetings were: "Name an industry in the Chateaugay Valley", "Name and give a fact about a person in WI or ACWW", and "Which book, music, or item would you take on a desert vacation?" Their plant sale earned a good contribution to the funds.

Dewittville invited Winston Keeler to speak about farm safety. He discussed tractors, electricity, herbicides, and insecticides, and said, "A gram of prevention is worth a kilogram of cure." They held a picnic in July with 50 mothers and children and had a visitor from England with whom they exchanged ideas on WI work. They also enjoyed a trip to Parc Safari African. A guest speaker, Mr. Wart, answered many questions about gardening. They signed a "Petition of Peace" and served meals for three days at the Huntingdon Fair. It was a big undertaking, but successful. They also sponsored their foster child from Senegal for another year.

Hemmingford's WI held a sales table at the Apple Festival for two days. Crafts were shown and baked goods were sold. At one of their meetings comments were made on the spraying of cornfields. The planes flew low but spray was spread by wind over other areas and, apart from the danger of breathing the spray, many beekeepers are losing their bees due to this. A guest speaker, Mr. H. Kennedy, gave a travel talk on a visit to Qatar, a small Arab state on the Persian Gulf. Rich in oil, the people have new homes, irrigation, trees, a university, and modern high schools. The WI scholarship was given to Jeff Gagne and a reminder was made to collect used postage stamps, particularly special issues and large denominations, for the ACWW Conference.

Dundee's ladies invited Mrs. Joanne Lynch to speak about her experiences as a minister's wife in Pincher Creek, Alberta.

Howick's project for the elderly was to place a bench at the Senior Citizen's residence and to look after flowers in this triangle of the village. A speaker, Rhoda McFarlane showed slides of a tour to New Zealand, Australia, Tahiti, Rarotonga, and Fiji. At a meeting on "The International Year of the Disabled" people in wheelchairs mentioned that doors are too narrow, wash basins and elevator buttons too high. Two new books were given to the elementary school library and a copy of the QWI Pioneer Women book was given to the Chateaugay Valley High School. At the August meeting all members were given a metric tape measure and a Canada recipe book. Members were told never to allow a dump to be placed near a farm. A farm on Norton Creek now has 70 acres of affected land. The dump covers 20 acres. This problem is six years old. Members donated \$250 as a second payment to the Barrie Memorial Hospital in Ormstown. A former R.N. member demonstrated the value of foot massage in general health and especially in treatment of stroke victims. A meeting was held under summer trees and the members later visited Leslie Rennie's antiques.

Visiting a battleground in our area was the summer idea of **Huntingdon** WI. On the beautiful

premises of the National Historic Centre at Allan's Corners 13 members and three guests met to learn the circumstances of those three battles which stopped the American invasion of Canada. Objects, sound tracks, films, and illustrations brought the display to life and led the visitors on a hunt for the past. The August meeting, with a special invitation to possible new members, was held as a garden party at my home and, with some luck, it was the only day of sunshine that week. We used the new song book of Hilda Graham's, and Nancy McGrimmon brought as a guest Mrs. Schuppler who played the accordion. At the end of the afternoon we had two new members and were very happy, as we had lost six for various reasons during the last year.

Ormstown's roll call: "Something interesting about your home" revealed much local interest in history. Another roll call "an incident at your wedding" was difficult to answer for some members as they have been married for over 65 years.

All six branches of **Compton** County held a musical evening in Pope Memorial School in Bury. This was in aid of their bursary fund. They made candies to be sold during intermission which always brings in a pleasing amount. Contributions were made to fire victims, school libraries, public speaking, CanSave, Sherbrooke Hospital, and Coins for Friendship.

Brookbury gave first and second prizes to the kindergarten class in the Bury School for printing and writing. **Bury** invited a community health nurse to speak about her duties. A second member of **East Angus** entered the "Nightgown Contest", and all of you who attended Convention will remember her as the friendly lady who played the piano.

A tea and sale was held at **Sawyer-ville** and in all other branches there were interesting and helpful readings during the meetings.

Aylmer WI made a donation to the Heart Fund and the President, Miss Hilda Graham, read an article on "The History of Arbor Day of 1872" and Home Economics Convener, Mrs. Wideman, read a report on children needing better food.

The **Inverness** branch chose a motto to that we should all pay more attention to: "Leave the car at home to rest a bit, walk instead, it will help to keep you fit." The roll call tied in with this theme — "demonstrate an exercise to help keep you fit." In a commentary about colour additives it was mentioned that nine of 33 colouring agents are synthesized from benzene, a petroleum extract, and that researchers have found a specific red dye causes cancer in rats and that another is banned in the United States but is still used in Canada.

Kinnear's Mills's motto was "Would the girl you were be proud of the women you are?" I find that a really exciting motto and well worth thinking about. The Home Economics Convener gave a recipe for making soap. Here it is: 2 quarts cold water, 1 tin lye, 4 pounds fat, 1/2 cup Lestoil, 1/4 cup Javex, 1 tablespoon soda, 1 tablespoon borax, 1 tablespoon Spic'n Span.

Empty lye gradually into cold water, stir until melted. Melt clean grease or lard, set aside until cooled, but still in liquid form. Pour the lye mixture slowly into the grease (not grease into lye), stir until it begins to thicken, then add remaining ingredients. Line a box with plastic and pour in. When cool, cut into pieces.

A very special occasion for the **Abbotsford** branch was the opportunity to view a few of Dr. Alice Johannsen's wonderful selection of nature slides. Dr. Johannsen is Director of the Mont St. Hilaire Nature Conservation Centre, and the members were brought up to date on these 2,200 wooded acres of unspoiled nature which are maintained for the benefit of student studies and the general public.

The introduction made by the President, Mrs. Pearl Rowell, gave some hint of the pleasure in store, when a few of Dr. Johannsen's many achievements were pointed out, including her several years as Curator of McGill's Redpath Museum where she and her staff provided instruction and enlightenment to so many adults and students. The slide presentation entitled "Nature on Your Doorstep" clearly illustrates the fact that enjoyment of nature

can be obtained, as the title indicates, without travelling any further than your doorstep or backyard. Anyone who has had the pleasure and opportunity of hearing Alice Johannsen's narrations on the many joys and exciting discoveries, both large and small, in the world of nature can appreciate the excitement the evening provided.

It must be mentioned that Anne-Marie, a young student who accompanied Dr. Johannsen as her assistant, quickly established a rapport with the younger people and ably assisted the guest speaker in the setting up of mockups and blowups of nature scenes, exhibits, etc., including a particularly intriguing and cleverly executed three dimensional creation of the Mont St. Hilaire region. Following the slide presentation a question and answer period elicited responses which obviously delighted and surprised the enthusiastic audience and further illustrated the fascination that the study of nature and the world of wildlife can provide.

More recently, in order to provide an outing for young and old alike, a bring-your-own-lunch-and-share get together was held in the Parish Hall and was well attended. The opportunity for adults to have a chat was appreciated, while the children were delighted to be able to play with the other youngsters and to swap an occasional sandwich or cookie.

Waterloo-Warden members voted to give \$50 to the Sherbrooke Hospital campaign. The Welfare and Health Convener reported about the use of safety belts and how children so often are the victims of fatal accidents if they are not using them. The Publicity Convener held a contest by showing pictures of 15 people recently in the news.

Granby West's Education Convener reported on the amount of crude oil that Mexico ships to Canada each year; the Agriculture Convener read an article on the king of pumpkins, weighing 459 pounds, and the Publicity Convener had a report on liquid pig manure disposal.

The motto at **Granby Hill** was "The worst place to live is beyond your income". The Citizenship Convener

spoke about a television program on Somalia (where many WIs had sent sewing kits recently). The Education Convener reported that Governor General Schreyer attended an Indian Chief's funeral while up North where 700 miles from the North Pole oil has been discovered. One member has made enough quilt blocks (crazy patchwork) for a quilt. These have been assembled and tied and tickets are being made for a drawing. They realized a satisfactory sum of money for a new project from a recent flea market.

A motto from **Belvidere**: "You can preach a better sermon with your life than with your lips." Members enjoyed a picnic with a few games of bingo and 500. Donations were voted to the Eaton Cemetery Memorial Fund and to the Sherbrooke County Plowmen's Association. **Brompton Road** also remembered the Plowmen. Mrs. Annie Goodfellow gave a demonstration on crocheting. For the program for Grandmother's Day, albums were brought in for all to view the grandchildren. The albums had been given out at the meeting last year and this was found to make an interesting project.

Ascot held a meeting in the lounge of the Grace Christian Home. They held a community picnic in July and a garden party in August.

Milby entertained the Brookbury WI and Mrs. Pansy Powell presented a Life Membership to Mrs. Ralph Broadhurst. The branch also provided daily transportation for a child to attend a camp at Ayer's Cliff. At a meeting Mrs. Doris Conley showed slides of Russia.

An early summer meeting of the **Lennoxville** WI was held at the lovely new home of Mrs. Warren Ross. Items of business included notice that the collection of paper and glass bottles will continue until further notice. A memorial donation was made to the Adelaide Hoodless Fund. Pamphlets on crime prevention and protection for senior citizens were on display and copies, which are issued by the local police department, were to be obtained for each member.

Mr. Ruth von Brentani
QWI Publicity Convener

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